

What Is Claimed Is:

1. A display system, comprising:
at least one fluorescent material having an
absorption band; and
a projection assembly having an electromagnetic
radiation source, the projection assembly configured to direct
radiation of one or more selected wavelengths within the
absorption band of the fluorescent material toward the
fluorescent material to cause at least a portion of the
fluorescent material to fluoresce.
2. The system as claimed in claim 1, wherein the
fluorescent material is carried on a support.
3. The system as claimed in claim 2, wherein the
support is a laminated article having a first ply and a second
ply.
4. The system as claimed in claim 3, wherein the
fluorescent material is located between the first and second
plies.
5. The system as claimed in claim 2, wherein the
support is a monolithic article.
6. The system as claimed in claim 2, including a
functional coating located on the support.
7. The system as claimed in claim 2, wherein the
support is an automotive transparency.
8. The system as claimed in claim 3, wherein at
least one of the first and second plies is selected from
glass, plastic, and ceramic.

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9. The system as claimed in claim 7, wherein at least one of the first and second plies is selected from annealed glass, tempered glass, and heat strengthened glass.

10. The system as claimed in claim 3, including an interlayer located between the first and second plies, with the fluorescent material located between the first ply and the interlayer.

11. The system as claimed in claim 9, including a functional coating located between the second ply and the interlayer.

12. The system as claimed in claim 9, wherein the interlayer is selected from polyvinyl butyral, plasticized polyvinyl chloride, and polyethylene terephthalate.

13. The system as claimed in claim 1, wherein the projection assembly is controlled to cause the fluorescent material to form an image.

14. The system as claimed in claim 1, wherein the support has a first portion that is substantially transparent to the one or more selected wavelengths and a second portion that is substantially non-transparent to the one or more selected wavelengths.

15. The system as claimed in claim 1, wherein the electromagnetic radiation source includes a laser or laser diode.

16. The system as claimed in claim 1, wherein the radiation is in the range of 300 nm to 410 nm.

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17. The system as claimed in claim 1, wherein the projection assembly includes a controller configured to selectively direct the radiation toward one or more selected areas of the fluorescent material.

18. The system as claimed in claim 1, wherein the projection assembly includes a directing system configured to direct the radiation from the radiation source toward the fluorescent material.

19. The system as claimed in claim 18, wherein the directing system comprises at least one mirror.

20. The system as claimed in claim 18, wherein the directing system includes a movement device configured to direct the radiation toward at least a selected area of the fluorescent material.

21. The system as claimed in claim 1, wherein the display system is a head-up display system.

22. The system as claimed in claim 1, wherein the support is selected from a commercial window, a residential window, a commercial sign, an advertising display, and an insulating glass unit.

23. A vehicle head-up display, comprising:
at least one fluorescent material having an absorption band; and
a projection assembly configured to direct radiation of one or more selected wavelengths within the absorption band of the at least one fluorescent material toward the fluorescent material to cause at least a portion of the fluorescent material to fluoresce.

24. A vehicle head-up display, comprising:
a windshield having a first ply and a second ply;
at least one fluorescent material having an
adsorption band and located between the first and second ply;
and

a projection assembly having an electromagnetic
radiation source and configured to direct radiation of one or
more selected wavelengths within the absorption band toward
the fluorescent material to cause at least a portion of the
fluorescent material to fluoresce to form an image.

25. A method of displaying images, comprising the
steps of:

selectively directing electromagnetic radiation from
a radiation source toward a support having at least one
fluorescent material; and

controlling the radiation source to cause the
fluorescent material to fluoresce to form an image.

26. The method as claimed in claim 25, including
defining a plurality of scan paths on at least a portion of
the fluorescent material and selectively energizing and de-
energizing the radiation source along the scan paths to form
the image.

27. The method as claimed in claim 26, including:
directing the electromagnetic radiation in a first
direction along a first scan path while selectively energizing
and deenergizing the radiation source;

displacing the electromagnetic radiation in a second
direction substantially perpendicular to the first direction;
and

directing the electromagnetic radiation in a third
direction substantially parallel to the first direction while
selectively energizing and deenergizing the radiation source.

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28. The method as claimed in claim 25, wherein the support is an automotive transparency and the method includes moving the radiation along at least a portion of the automotive transparency to form the image.

29. The method as claimed in claim 27, including energizing and deenergizing the radiation source to form adjacent fluorescent and non-fluorescent areas on the support.

30. The method as claimed in claim 27, including blocking and unblocking radiation from the radiation source to form adjacent fluorescent and non-fluorescent areas on the support.

31. A vehicle having a head-up display as claimed in claim 24.

32. A display system, comprising:
at least one light emitting material having an absorption band; and
a projection assembly having an electromagnetic radiation source, the projection assembly configured to direct radiation of one or more selected wavelengths within the absorption band of the light emitting material toward the light emitting material to cause at least a portion of the light emitting material to emit light.

33. The system as claimed in claim 32, wherein the light emitting material is selected from the group consisting of fluorescent materials, phosphorescent materials, and mixtures thereof.

34. The system as claimed in claim 33, wherein the system is a vehicle head-up display.

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35. A method of displaying images, comprising the steps of:

selectively directing electromagnetic radiation from a radiation source toward a support having one or more light emitting materials; and

controlling the radiation source to cause the light emitting material to emit light to form an image.

36. The method as claimed in claim 35, wherein the light emitting material is selected from the group consisting of fluorescent materials, phosphorescent materials, and mixtures thereof.

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